



AF 214
2631

PTO/SB/21 (09-04)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

5

Application Number

09/654,643

Filing Date

09/05/2000

First Named Inventor

Pak Shing Chau

Art Unit

2631

Examiner Name

Bayard, Emmanuel

Attorney Docket Number

RA-194 (RA194.P.US)

ENCLOSURES (Check all that apply)



Fee Transmittal Form



Fee Attached

Check # 2004



Amendment/Reply



After Final



Affidavits/declaration(s)



Extension of Time Request



Express Abandonment Request



Information Disclosure Statement



Certified Copy of Priority Document(s)



Reply to Missing Parts/
Incomplete Application



Reply to Missing Parts
under 37 CFR 1.52 or 1.53



Drawing(s)



Licensing-related Papers



Petition



Petition to Convert to a
Provisional Application



Power of Attorney, Revocation



Change of Correspondence Address



Terminal Disclaimer



Request for Refund



CD, Number of CD(s) _____

☐ Landscape Table on CD



After Allowance Communication to TC



Appeal Communication to Board
of Appeals and Interferences



Appeal Communication to TC
(Appeal Notice, Brief, Reply Brief)



Proprietary Information



Status Letter



Other Enclosure(s) (please identify
below):

1. Form PTO/SB/08A (1 page).
2. Form PTO/SB/08B (1 page).
3. Copies of all references cited on form PTO/SB/08B.
4. Return Receipt Postcard.

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name

Silicon Edge Law Group, LLP Arthur J. Behiel, Patent Attorney

Signature

Printed name

Arthur J. Behiel

Date

4/26/2005

Reg. No.

39,603

CERTIFICATE OF TRANSMISSION/MAILING

I hereby certify that this correspondence is being facsimile transmitted to the USPTO or deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on the date shown below:

Signature

Typed or printed name

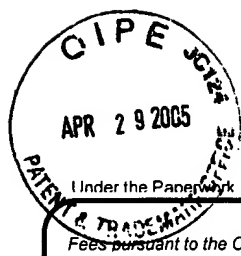
Laurie Moreno

Date

4/26/2005

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



PTO/SB/17 (12-04v2)

Approved for use through 07/31/2006. OMB 0651-0032

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Effective on 12/08/2004.
Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4818).**FEE TRANSMITTAL**
For FY 2005☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 180.00

Complete if Known

Application Number	09/654,643
Filing Date	09/05/2000
First Named Inventor	Pak Shing Chau
Examiner Name	Bayard, Emmanuel
Art Unit	2631
Attorney Docket No.	RA-194 (RA194.P.US)

METHOD OF PAYMENT (check all that apply)☒ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____☐ Deposit Account Deposit Account Number: _____ Deposit Account Name: _____

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

☐ Charge fee(s) indicated below☐ Charge fee(s) indicated below, except for the filing fee☐ Charge any additional fee(s) or underpayments of fee(s)
under 37 CFR 1.16 and 1.17☐ Credit any overpayments**WARNING:** Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**FEE CALCULATION****1. BASIC FILING, SEARCH, AND EXAMINATION FEES**

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	_____
Design	200	100	100	50	130	65	_____
Plant	200	100	300	150	160	80	_____
Reissue	300	150	500	250	600	300	_____
Provisional	200	100	0	0	0	0	_____

2. EXCESS CLAIM FEES**Fee Description**

Each claim over 20 (including Reissues)

Fee (\$)	Small Entity Fee (\$)
50	25

Each independent claim over 3 (including Reissues)

200	100
-----	-----

Multiple dependent claims

360	180
-----	-----

Total Claims**Extra Claims****Fee (\$)****Fee Paid (\$)**

_____ - 20 or HP = _____ x _____ = _____

HP = highest number of total claims paid for, if greater than 20.

Indep. Claims**Extra Claims****Fee (\$)****Fee Paid (\$)**

_____ - 3 or HP = _____ x _____ = _____

HP = highest number of independent claims paid for, if greater than 3.

Multiple Dependent Claims**Fee (\$)****Fee Paid (\$)****3. APPLICATION SIZE FEE**

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets	Extra Sheets	Number of each additional 50 or fraction thereof	Fee (\$)	Fee Paid (\$)
_____	_____	_____	_____	_____

_____ - 100 = _____ / 50 = _____ (round up to a whole number) x _____ = _____

4. OTHER FEE(S)

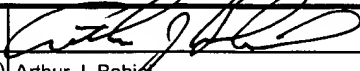
Non-English Specification, \$130 fee (no small entity discount)

Fees Paid (\$)

Other (e.g., late filing surcharge): 1.17(p) Submission of an Information Disclosure Statement

\$180.00

SUBMITTED BY

Signature		Registration No. (Attorney/Agent) 39,603	Telephone 925-621-2113
Name (Print/Type)	Arthur J. Behr		Date April 19, 2005

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Pak Shing Chau, Haw-Jyh Liaw, Jun Kim and Jared L. Zerbe

Assignee: Rambus Inc.

Title: "Low-Latency Equalization in Multi-Level, Multi-Line Communication Systems"

Serial No.: 09/654,643 Filed: 09/05/2000

Examiner: Bayard, Emmanuel Tel: 571-272-3016

Docket No.: RA-194 Art Unit: 2631
(RA194.P.US)

Mail Stop AF
Commissioner For Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Sir:

Pursuant to 37 C.F.R. §1.56, §1.97 and §1.98, Applicants bring the 8 documents listed on the enclosed forms PTO/SB/08A (1 page) and PTO/SB/08B (1 page) to the Examiner's attention in the above-identified application. Citation of the listed documents shall not be construed as:

1. an admission that the documents are necessarily prior art with respect to the instant application;
2. a representation that a search has been made; or
3. an admission that the information cited is, or is considered to be, material to patentability as defined in §1.56(b).

I hereby certify that this correspondence is being deposited with the United States Postal Service via First Class Mail and is addressed to: Mail Stop Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

4/26/2005

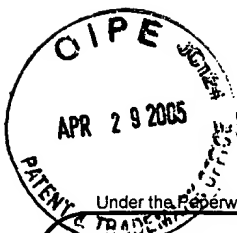
Date

Laurie Moreno

Respectfully submitted,

Arthur J. Behiel
Attorney for Applicants
Reg. No. 39,603

05/02/2005 EFL0RES 00000021 09654643 180.00 0P
01 FC:1806



PTO/SB/08B (08-03)

Approved for use through 07/31/2006. OMB 0651-0031
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

(Use as many sheets as necessary)

Sheet 2

of

2

Complete if Known

Application Number	09/654,643
Filing Date	09/05/2000
First Named Inventor	Pak Shing Chau
Art Unit	2631
Examiner Name	Bayard, Emmanuel
Attorney Docket Number	RA-194 (RA194.P.US)

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	2	CHOI, JONG-SANG et al., "A CMOS 3.5Gbps Continuous-time Adaptive Cable Equalizer with Joint Adaptation Method of Low-Frequency Gain and High-Frequency Boosting." 2003 Symposium on VLSI Circuits Digest of Technical Papers. Pgs. 103-106.	
	3	SHAKIBA, MOHAMMAD HOSSEIN, "WP 23.3 A 2.5Gb/s Adaptive Cable Equalizer." 1999 IEEE International Solid-State Circuits Conference. Pages 396-397.	
	4	BAKER, ALAN J., "FA 10.7: An Adaptive Cable Equalizer for Serial Digital Video Rates to 400Mb/s." 1996 IEEE International Solid-State Circuits Conference." Pages 174-175.	
	5	KUDOH, YOSHIHARU et al., "A 0.13-um CMOS 5-Gb/s 10-m 28 AWG Cable Transceiver with No-Feedback-Loop Continuous-Time Post-Equalizer." IEEE Journal of Solid-State Circuits, Vol. 38, No. 5, May 2003. Pages 741-746.	
	6	GRANBERG, TOM, "Handbook of Digital Techniques for High-Speed Design." Cover and pub. pg., pgs. 211-226.	
	7	FARJAD-RAD, RAMIN et al., "0.622-8.0Gbps 150mW Serial IO Macrocell with Fully Flexible Preemphasis and Equalization." 2003 Symposium on VLSI Circuits Digest of Technical Papers. 4 Pages.	
	8	STOJANOVIC, VLADIMIR et al., "Adaptive Equalization and Data Recovery in a Dual-Mode (PAM2/4) Serial Link Transceiver." June 2004. 4 pages. Rambus, Inc., Los Altos, CA 94022, USA and Department of Electrical Engineering, Stanford University, CA 94305, USA.	

Examiner
SignatureDate
Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Applicant's unique citation designation number (optional). ² Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.